

MISSOURI. Conservationist

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The Future of Child's Play

I'm the director of the Department of Conservation because I was a kid who loved the outdoors. From an early age, life with my brothers and sister on a small Ozarks farm left us free to explore the world.

Each spring, the part of Carter Creek that ran through our property would flash into a river and chew out scour holes that served as summer's swimming holes. I loved to fish and was proud when I could hunt squirrels and rabbits alone. My brother Steve and I spent memorable nights with a flashlight hunting frogs on farm ponds, and we spent several others with our neighbor, Harold, following his blue tick hounds trying to tree raccoons in the dead of winter. While in sixth grade, I remember an assignment to make a leaf collection. Dad and I searched the entire farm and found enough leaves for an "A," plus some extra credit. That was also the year I eagerly read back-to-back the adventures of both Tom Sawyer and Huckleberry Finn.

This childhood foundation grew into adult pursuits of deer, small game and turkey hunting and, my personal favorite today—float stream fishing. My youth was also the starting point for an education in natural science and a career in conservation.

My experience is common for anyone my age reared on a farm in rural Missouri. However, even farm kids today have more competing for their time than I did then.

There is real concern that the next generation will not have the outdoor experiences enjoyed by previous generations. The impact of this is not clear, but some believe that childhood experiences in nature frame positive social values and consciousness resulting in a higher quality of life.

In his book *Last Child in the Woods*, Richard Louv links the absence of nature to disturbing trends among our children—the rise in obesity, attention disorders and depression. Louv advocates becoming actively involved in making "nature play" an integral part of kids' lives. "We have such a brief opportunity to pass on to our children our love for this Earth, and to tell our stories," writes Louv. "In my children's memories, the adventures we have had together in nature will always exist."

My outdoor memories are priceless, so I take personal responsibility for making new ones with my grandchildren. Their backyards are places to begin learning about trees, other plants, insects and birds, and perhaps to learn archery skills or casting with a rod and reel. My first goal is selfish—some quality time with the grandkids. The second is to instill an appreciation of nature that will reward these children for the rest of their lives. I don't yet have a single family memory that began, "One day while we

were watching television...."

Think about the opportunities to share nature with those in your life. Find some leaves, go to a pond, take a hunter education class, or pass down your favorite outdoor author. You will dramatically increase the number of future adults who value Missouri's resources and take positive actions to protect them.

John Hoskins, director



JOHN HOSKINS (left) at age 7 with his brother Steve (right) on the Current River near Van Buren. His childhood enthusiasm for outdoor pursuits has been a foundation for his career in conservation. When not working as director, he enjoys fishing, hunting, biking and hiking with his family and friends.









OUR MISSION: *To protect and manage the fish, forest and wildlife resources of the state; to serve the public and facilitate their participation in resource management activities; and to provide for all citizens to use, enjoy and learn about fish, forest and wildlife resources.*



On the cover: Many anglers find fishing early or late in the day yields the most success. Read "Fishing KC," starting on page 20, to find a great location near Kansas City. Also see "Don't Dump That Bait!" starting on page 14, to find out how to properly dispose of your bait.

NextGEN

This section reports on goals established in *The Next Generation of Conservation*. To read more about this plan, visit www.missouriconservation.org/12843.

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PEER REVIEW

Congratulations to Ara and all the team at *Missouri Conservationist*!

Usually when I read a lead in a publication telling about all the changes and fantastic improvements they have made, I have to go back and try to find what's different and if it made any real difference. The April issue is a wonderful exception.

I have read the *Conservationist* since my high school years in the '50s, and through a teaching career that also ran parallel to being founding secretary/editor of the Missouri Prairie Foundation, president of Burroughs Audubon, a founder of Lakeside Nature Center, 18-year director of the Camp Hope environmental science resident camp, active member of KC Wildlands, and recipient of the "Plastic Deer Award" (Conservation Educator of the Year).

I have seen a lot of changes and growth in MDC (including going from advocating some wildlife plants to discovering they became dangerous invaders of natural areas), but this issue is one of the really special events (like the opening of the Anita Gorman Discovery Center).

The NextGEN pages are colorful, focus attention with a few short paragraphs on something interesting and important and informative. Nappadol Paothong's article on photographing king rails (a bird that is not on my 1000-species life list nor have I even heard one), was really riveting. Great photos—and I didn't have to feed myself to hordes of mosquitoes like he did to enjoy them. Cliff White's photo of the fishing lake reflected in the dark glasses on p. 28 was another highlight picture. And, of course, I always enjoy the Chmielniak cartoons, including the depressing sight of the hulking legs of the first robin of spring.



I know you all will keep up the great work, and I am happy to be among the millions who can count ourselves blessedly fortunate to live in a state of folks with the foresight and commitment to have voted to have conservation programs that serve the people and the wildlife and not just the rich and powerful special interests and politicians.

Thanks for all you have done, are doing, and will continue to do when I am no longer around to love you.

Richard G. (Dick) Dawson, Kansas City

POND-FISHING CONVERT

There was an odd sense of irony when I returned home from fishing in the Rolla area the week-end of [March] 30th.

After my friends and I had been rained out from trying to fish some of the local rivers and streams, we set our sights on Indian Trail Conservation Area for no other reason than it was on the road we were driving. After sighting a pond in the woods, we took off by foot with our gear through the brush. Up close, we discovered that we'd maybe three spots to cast from.

We each took our positions and on the first cast I landed a beauty. We spent the rest of the day driving through the conservation area looking for every other pond on the map that we picked up later, enjoying the sights, sounds and sense of exploration. Consider me a believer [*Hunting for Fishy Waters*; April]. Keep up the excellent work.

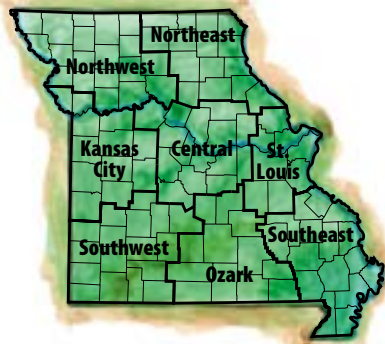
Bob Parks, Kansas City

PERSIMMON PLEASURES

I was watching Missouri Outdoors, Sunday, April 8, and would like a copy of your persimmon cookie recipe. I have several groves of persimmon and a great bounty come 1st to 2nd frost.

Robin Suppenbach, Pleasant Hill

Editor's note: KEVIN'S PERSIMMON COOKIES: 1 c. persimmon pulp, 2 eggs, 1 ½ c. oil, 4 ½ c. flour, 1 ¼ c. sugar, ½ tsp. salt, 1 c. pecans (or other nuts), ½ c. raisins, 2 Tbsp. vanilla, 1 Tbsp. butter flavor, ½ tsp. cinnamon, allspice or ground cloves. Mix and bake 10–12 minutes on ungreased cookie sheet at 350F.



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Reader Photo

THE BEAUTY OF BRYOZOANS

These harmless, jellylike masses are called bryozoans. The masses may attain the size of a basketball and contain thousands of tiny filter-feeding animals. Considered indicators of good water quality as they cannot survive in polluted or muddy water, bryozoans can be found attached to objects in ponds, lakes and slow streams. This photo was submitted by Brian Dannaldson of Kearney.



Species of Concern

Hellbender



Common name: Eastern and Ozark hellbenders

Scientific names: *Cryptobranchus alleganiensis alleganiensis* and *C. a. bishopi*

Range: Eastern subspecies: Meramec, Big, Gasconade, Big Piney and Niangua rivers, Osage Fork of the Osage River. Ozark subspecies: Current, Jacks Fork, North Fork and Eleven Point rivers and Bryant Creek.

Classification: State endangered

To learn more about endangered species: www.missouriconservation.org/8227

AT 1 TO 2 FEET long, these are among the world's largest salamanders. Missouri is the only state inhabited by both subspecies. They were thriving here until the 1980s. Since then, Eastern hellbender numbers have plummeted 80 percent, and the Ozark subspecies has declined by 70 percent. They need clean, cool water and large flat rocks to hide under. One threat to their survival is stream changes that reduce water quality and cause gravel or silt to fill stream beds. Hellbenders also are killed by uninformed anglers and giggers, who believe false tales that they are dangerous or that they eat lots of fish. In fact, crayfish make up 90 percent of their diet. If you catch one by accident, release it immediately and notify Herpetologist Jeff Briggler, 573-751-4115 or e-mail Jeff.Briggler@mdc.mo.gov.

Native Plant Field Day

Come learn how to use native plants June 21.

The MU Bradford Research and Extension Center will host a Native Plant Field Day from 4 to 8 p.m. June 21. Participants will learn about native plants for landscaping, rain gardens, native plants for wildlife and agriculture. The day will include indoor and outdoor demonstrations and tours. The event is free and open to all. Directions and additional information are available from Thresa Chism or Tim Reinbott, 573-884-7945, or Nadia Navarrete-Tindall, NavarreteN@missouri.edu, or at aes.missouri.edu/bradford/bfdir.stm.



June Bruins are Hungry

Keep food, garbage out of bears' reach.

Imagine you just woke up from a three-month nap. You haven't had your coffee. You are hungry, and the refrigerator is empty. That's how bears feel in June. They go on the prowl for food, and they aren't in the mood for nonsense. Bearing this in mind, wise Missourians—especially in the southern half of the state—make sure that livestock feed and garbage are locked up. They keep pet food indoors, put away bird feeders and string electric fences around bee hives. Black bears (the only kind native to Missouri) are seldom aggressive. If you encounter one, don't make sudden movements. Speak in a calm voice so as not to startle the animal, and back away until the bear is out of sight.





Wildflowers on Glades

Visit Valley View Glades NA & Victoria Glades CA in June.

These two Jefferson County gems really shine in June, when Missouri evening primrose and other dazzling wildflowers festoon the rocky landscape. Each area has more than two miles of hiking trails through moderately difficult terrain. Watch for glade wildlife, including scorpions, tarantula spiders and copperheads. Don't lift rocks in search of these animals, as this destroys their habitat. Glade management includes removal of cedar trees and periodic burning to maintain the rare glade ecosystems. For more information, search for these areas in our online atlas at www.missouriconservation.org/2930 or call 636-405-0157.



area reduces fish injuries from swallowed hooks, so fish live longer. The new "slot" length limit allows medium-sized fish to grow, promising a return to the days when big trout drew anglers to Taneycomo from across the nation. The good old days are still ahead for this famous lake.

Fishing Hot Spot

The lunkers are back at Lake Taneycomo.

Ten years ago, the Department of Conservation made big changes to fishing rules at Lake Taneycomo. Those changes are paying dividends in big fish. In a special management area from just below Table Rock Dam to the mouth of Fall Creek, all rainbow trout between 12 and 20 inches must be released immediately. Only flies and artificial lures are legal there. Shepherd of the Hills Hatchery and the Neosho National Fish Hatchery stock approximately 700,000 rainbow trout and 10,000 brown trout measuring 10 to 11 inches at Lake Taneycomo each year. Eliminating natural bait in the special management

Trail Guide



DEER RIDGE CONSERVATION AREA



NO PLACE IN northeastern Missouri tops Deer Ridge CA north of Lewis-town for variety of recreational opportunities. You can wander its 6,996 acres hunting for everything from mushrooms to deer, turkey, doves, quail, squirrels and rabbits. Dozens of fishless ponds attract migrating waterfowl in the spring and fall. Anglers can choose between the 48-acre Deer Ridge Community Lake and the North and Middle Fabius rivers, where bass, crappie, catfish and sunfish thrive. More than a dozen trail loops and spurs provide ample access for birders, nature photographers and folks just looking to stretch their legs. There are designated camping areas, picnic shelters with electricity and an unstaffed archery, rifle, pistol and shotgun range. This area is part of the Department's Riparian Ecosystem Assessment and Management Project, a study of how forest-management practices affect bottomland forest vegetation and wildlife.

Trails: 19 miles of hiking, biking and horse trails

Unique features: A mix of bottomland forest, fields and wetlands

Contact by Phone: 660-727-2955

For more information: www.missouriconservation.org/2930, and search "Deer Ridge"



TAKING ACTION

Greater Prairie-Chicken Recovery

Nominate Now

Honor Missouri citizens who contributed to conservation.

The Missouri Conservation Commission would like to recognize citizens who make outstanding contributions to conservation. Nominations are being sought for the Master Conservationist Award and the Missouri Conservation Hall of Fame. The Master Conservationist Award honors living or deceased citizens while the Missouri Conservation Hall of Fame recognizes deceased individuals. Those who can be considered for either honor are:

- Citizens who performed outstanding acts or whose dedicated service over an extended time produced major progress in fisheries, forestry or wildlife conservation in Missouri.
- Employees of conservation-related agencies who performed outstanding acts or whose dedicated service over an extended time produced major progress in fisheries, forestry or wildlife conservation in Missouri.

Anyone can submit a nomination, which should include a statement describing the nominee's accomplishments and a brief biography. Please submit nominations by July 13 to Janet Bartok, Missouri Department of Conservation, P.O. Box 180, Jefferson City, MO 65102 or e-mail Janet.Bartok@mdc.mo.gov.

A screening committee appointed by the Department's director meets semi-annually to consider nominees, with the Conservation Commission conveying final approval.



Group featured: Cole Camp Grassland Conservation Partnership

Group mission: Restore grassland habitat and educate the public about prairie-chicken recovery efforts and grassland management.

Group location: Cole Camp; Hi Lonesome and other local prairies.



HEARING THE BOOM of prairie-chickens fade to a murmur has served as an alarm for Cole Camp residents to take action to improve local grasslands. Local citizens answered the call to action by teaming up with the Missouri Department of Conservation and Audubon Missouri to create a unique approach to improving the health and abundance of public and privately owned grasslands. Audubon Missouri will hire a full-time staff person to educate the public about grassland issues, assist landowners to establish, improve and manage private grasslands and implement locally driven ideas that allow businesses and rural residents to tap into sustainable economic opportunities created by a growing eco-tourism industry. Expected benefits include increases in the number and diversity of grassland-dependant wildlife and nature viewing opportunities.



Regulation Update

Catfish handfishing season has been cancelled.

Anglers who pursue catfish should view the Department of Conservation Web site www.missouriconservation.org and search "catfishing."

The site provides details on the cancellation of the handfishing season, following research indicating that nests left unprotected by

adult catfish produced no young and that high angler harvest of catfish is impacting the number of larger fish. Besides ending

the handfishing season, the Department is considering other harvest restrictions for catfish. Several public meetings will be held to discuss options for harvest regulations and anglers' desires to catch larger, trophy-size flathead and blue catfish.



Squirrel Season

The '06 acorn crop promises good hunting for '07.

Conditions are favorable for a good squirrel hunting season. The best way to predict squirrel hunting opportunities is to look at the size of the acorn crop the previous fall. The 2006 bumper crop of acorns provided plenty of food to enable squirrels to survive the winter and reproduce.

Squirrel hunting season kicked off May 26 and continues through February 15, 2008. The daily limit for squirrel is six, and the possession limit is 12. Both rifles and shotguns are legal methods for pursuing squirrels. Shotguns may be more effective



when trees are fully leafed and squirrels are only glimpsed briefly as they move around in the treetops.

Black Bass Fishing

Scout it Out



Name: Big River

Location: The Big River is located in east-central Missouri and originates in northern Iron County. It flows 138 miles northward to its confluence with the Meramec River near Eureka.

Conservation lands: Hughes Mountain NA, Young and Pea Ridge conservation areas

For more info: www.missouriconservation.org/2930 and search "Hughes" or "Young" or "Pea"



LOOKING TO REEL in trophy-sized black bass? Follow the lead of Missouri's Master Anglers and wet your line in the Big River. The Master Angler Program recognizes anglers who catch lunkers that don't quite measure up to state records. Since 1999, anglers have caught 24 smallmouth bass from the Big River that qualify for the Master Angler Program.

With a lazy gradient of about 2 feet per mile, Big River is attractive to float fishers. Smallmouth bass, catfish and goggle-eye are high on the list of favorite fish. In the Big River mainstream and its tributaries the daily and possession limit is 12 black bass, which may include no more than six largemouth bass and smallmouth bass in the aggregate. There is no minimum length limit on spotted bass.

Big River provides more than stream recreation. Conservation lands along the Big River include Hughes Mountain Natural Area, and Young and Pea Ridge conservation areas. The areas offer hunting, nature study, wildlife photography and many other outdoor recreational opportunities.



Floating Etiquette

Keep it clean, keep it safe and keep your distance.

Opinions vary on what makes a float trip enjoyable, but most agree that people who engage in offensive and dangerous behaviors while on a stream ruin a float. Following a few simple rules of etiquette can keep streams enjoyable for all:

- Do not litter.
- Respect private property. Enter and exit streams at public accesses.
- Prepare boats away from ramps. Enter the water when other boats are out of sight.
- Wait for other boats to clear before entering a chute. Yield to others where appropriate. Avoid contact with anglers and other boats.
- Do not use audio/video equipment within earshot of other parties.
- Nudity, profanity and drunkenness are inappropriate in a public setting.
- State law requires that all coolers be sealed to prevent the contents from spilling into the stream. Glass bottles and jars are prohibited.

Conservation agents and staff from other state and federal agencies patrol streams to assist floaters and enforce laws prohibiting illegal drug use, public intoxication and disorderly conduct.



Prairie Viewing

June is showtime for tickseed to turtles.

all, green grasses and wildflowers of virtually every color bowing and swaying to warm breezes under a sun-drenched sky is just one of many beautiful sights to enjoy at a Missouri prairie.

The best time to view prairie wildflowers and wildlife in Missouri is June. Pale purple and yellow coneflowers will be in bloom, as well as prairie rose, tickseed coreopsis and black-eyed Susan. Also look for dickcissels, grasshopper sparrows, western chorus frogs, ornate box turtles and prairie voles.

For more information on Missouri's public prairies download this pdf at www.missouriconservation.org/76.

FEATHERED FASCINATION

Native Hummingbirds

SOME OF NATURE'S smallest creatures often are the ones humans find most fascinating. Whether enthralled by their ability to hover or their iridescent plumage, people go to great lengths to attract ruby-throated hummingbirds.

Hummingbirds occur only in the western hemisphere. Ruby-throats are the only hummingbirds that nest in Missouri. They arrive in the state in April. Males and females remain together only for courtship and mating. Males court females with a dive display or U-shaped looping flight, starting as high as 12 to 15 feet above the females. Hummingbirds typically lay two white, peanut-sized eggs. The eggs hatch in two weeks. The young fledge in about 20 days.

The hummingbird's rapid wing beats of 50 per second enable it to move forward, backward, upward and downward, and to achieve a flight speed of 60 miles per hour. The ability to hover allows the birds to use the same food source as bees, nectar. Hummingbirds feed by probing their long bills deep into flower centers. The birds' rapid wing movements make a low buzzing sound, which contributes to the bird's name. During aggressive encounters, males emit a higher-pitched, louder hum than females.

More information on enjoying Missouri's birds is online at www.missouriconservation.org/8167.



Ruby-throated hummingbird



Stash Your Trash!

Mesh bags help keep streams clean.

Missouri streams attract hundreds of thousands of floaters and anglers annually, and with that popularity comes a challenge—how to prevent drink containers, sandwich bags and candy wrappers from ruining scenic landscapes. The Stash Your Trash Program helps meet that challenge. Each year, the Conservation Department provides more than 300,000 litter bags through canoe outfitters and Stream Teams to ensure that litter doesn't escape. The mesh bags don't collect water like plastic trash bags do. The bags' drawstring tops make it easy to keep trash contained, even if your canoe or raft swamps. Don't shove off without one!



Discarded nylon fishing line is bad news. It gets caught in boat motor propellers, traps birds and other wildlife and makes fishing spots look ugly. You can ensure that used fishing line doesn't harm nature and contributes to better fishing through the Monofilament Recovery and Recycling Program. The program offers plans for simple, inexpensive, easily installed recycling bins made of PVC pipe. You can send line collected from the bins to Pure Fishing, a fishing equipment manufacturer. The company recycles used line to create artificial fish habitat structures. The program is a perfect fit for Stream Teams that conduct stream cleanups, since it prevents waste fishing line from becoming litter in the first place. It also fits well with No M0re Trash!, a cooperative effort of the Missouri Conservation and Highway and Transportation departments, that aims to reduce litter. To order recycling bins and learn more about the program, call 800-781-1989 or visit www.mostreamteam.org/mrrp.asp. After removing hooks, sinkers, vegetation and other debris, send monofilament fishing line only to Pure Fishing Inc., 1900 18th Street, Spirit Lake, IA 51360-1041.

Recycle Your Fishing Line

Use recycling bins to help protect wildlife.

Discarded nylon fishing line is bad news. It gets caught in boat motor propellers, traps birds and other wildlife and makes fishing spots look ugly. You can ensure that used fishing line doesn't harm nature and contributes to better fishing through the Monofilament Recovery and Recycling Program. The program offers plans for simple,

Stream Team



Ozark Wilderness Waterways Club



THE OZARK WILDERNESS Waterways Club (OWWC) was formed in 1956, and began conducting river cleanups long before becoming one of Missouri's first Stream Teams in 1989. Since joining Missouri Stream

Team, the OWWC has removed nearly 19 tons of trash from the Black, Blue, Eleven Point, Indian, Jacks Fork, Missouri, Niangua and North Fork rivers. Members have devoted more than 300 hours to water-quality monitoring and have worked more than 360 hours at educational displays for schools, fairs and malls. They write articles, conduct educational programs and hold and attend workshops. In all, they have contributed 7,749 hours—nearly four person-years of full-time labor. "It's hard work," said team member Judith Guyn, "but we are blessed with such beautiful streams in Missouri; it is easy to give back by taking care of a few of them." Visit www.hometown.aol.com/owwccanoecub for more information about the OWWC.

Stream Team #: 41

Date formed: June 13, 1989

Location: Blue River, Jackson County

For more info about Stream Teams: www.mostreamteam.org



Our Glorious Forests

UNION RIDGE CA



Size: 7980.7 acres

Location: Junction of Adair, Putnam and Sullivan counties

Importance: Diverse wildlife habitat and multiple recreation opportunities including disabled-accessible facilities

Things to do: Picnic, view/photograph wildlife and uncommon-to-rare wildflowers, birding, hunting, fishing and camping

Online information: www.missouriconservation.org/2930 and search "Union"

For more information contact the area manager: 660-785-2420



IF YOUR FAVORITE park features tall, wide-crowned oaks shading grasses and woodland flowers, you have a good idea of the vision guiding woodland restoration at Union Ridge Conservation Area (CA). Native woodlands (not as open as prairies, not as dense as forests) have appealed to the human spirit for millennia, and most urban parks are designed on their model. Because they are so structurally diverse—providing grasses, wildflowers, a few shrubs and mature, mast-bearing trees—woodlands are also important to a wide range of wildlife. Quail and turkey nest in them, and deer browse their acorns in the fall. During the last four years, Department of Conservation staff has applied fire and thinning to roughly 300 acres of what were originally native woodlands at Union Ridge CA. In time, management will restore these acres to their native diversity and produce a classic, park-like landscape that will nurture wildlife and appeal to human visitors.

Livestock in Woodlands

Forest grazing can hurt trees, wildlife and livestock.

If you value your historic hardwood groves or woodlands, keep livestock out of them, especially during the growing season.

Continuous grazing pressure can wipe out the forest understory, opening fragile soils to erosion and exposing the roots of mature trees.

Forest browse may also be nutrient-poor or poisonous. Learn more about excluding livestock from forests

at www.missouriconservation.org, and type "forest grazing hurts" in the search field. If you need help fencing livestock, ask your local Department forester about cost-share programs.



Minimize Oak Decline

You can control it in your private woodlot.

If you have a woodlot, especially in southern Missouri, you may be familiar with oak decline. It appears in mature oak forests where trees grow on shallow, rocky ridgelines and have suffered excessive drought, insect defoliation, late-season frosts or acute pollution. The signs include presence of red oak borers, logs riddled with holes and stringy black fungus growing on trunks and roots. Despite an increase in southern Missouri, you can stop oak decline in your private woodlot.

First, remove diseased trees from high-use areas and contact a professional forester who can help you develop a long-term management plan. Also, thin out weakened, diseased oaks and plant species such as shortleaf pine and white oak, which are long-lived and drought-tolerant.

For more information, contact your local Department of Conservation forester.





Farm Bill in Action—FLEP

Gives technical, educational and cost-share assistance

Even if you own rural land in Missouri, you might not be aware of all the good things farm bill conservation programs do for Missourians, their agri-businesses and the wildlife habitat under their stewardship. This summer Congress debates the federal farm bill, including its many voluntary conservation incentive programs. These provide technical assistance, education and cost-share support to qualifying landowners, enabling them to enhance or create wildlife habitat while continuing their farming operations.

One such program is the Forestland Enhancement Program—or FLEP. Warren County resident Huey Rodeheaver saw dramatic improvements in his forest's health after enrolling 239 acres of his land into this program. He recently flushed a covey of 14 quail for the first time in the nearly 10 years he has owned his farm. His Natural Resources Conservation Service and Missouri Department of Conservation advisors attribute the covey's appearance to the improved herbaceous/shrub layer in the treated areas. Rodeheaver's land lies within a mile of two prominent Department of Conservation areas (Daniel Boone and Little Lost Creek) that are being managed to benefit sensitive migrant songbirds, ruffed grouse and woodcock. As Rodeheaver's FLEP treatments continue, they will contribute substantially to this larger initiative.

Since 2003, Missouri has received \$998,000 in FLEP funds, providing educational materials, cost-share and planning assistance to 295 non-industrial private forest landowners. You can



keep an eye on 2007 farm bill progress and revisions at www.agriculture.house.gov or www.agriculture.senate.gov.

Eradicate Sericea Lespedeza

Habitat Hint



Best practices:

- Identify and mark infestations for repeated treatment. Single treatments will not control sericea infestations of any size.
- For light infestations, spray with triclopyr+fluroxypyr at 1 ounce to the gallon in May or June when plants are 8–10" tall and still succulent. Plan to repeat this treatment every year until the infestation is gone. Triclopyr works through July and August.
- Dense infestations require a variety of repeated treatments. Grazing, late summer burning and mowing at first flower will reduce seed production but will not kill mature plants, which will require broadcast spraying.
- Avoid spraying drought-stressed plants because they don't absorb herbicide well. Treating within 10 days after rain is best, particularly in late summer.

Phone contact: To locate a private land conservationist near you, see page 3 for a list of regional office phone numbers.

For more land management information: www.missouriconservation.org/7905

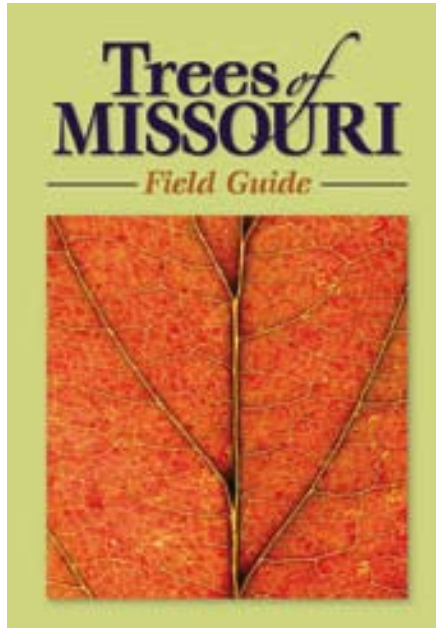
SERICEA LESPEDEZA, a rapidly spreading, control-resistant plant from Asia, has become a scourge to wildlife habitat and livestock pastures all across the state. Long-term success depends on early detection and repeated action. Treatment can begin in June. See the best practices panel (above) for control methods. For complete control details, contact your private land conservationist at www.missouriconservation.org/14140.



Trees of Missouri Field Guide

Deepen your knowledge of Missouri's trees.

How many times have you noticed an unusual leaf, bark pattern or bough-high bloom and wondered, "What is that tree?" Now you can stop wondering and start naming the trees you encounter. Don Kurz's *Trees of Missouri Field Guide* will show you how. Based on Kurz's original *Trees of Missouri*, this concise, easy-to-carry field guide will help you identify trees in your yard, neighborhood or natural area. More than 170 species are described, and species are organized visually by leaf arrangement and shape. Easy-to-understand descriptions, range maps and full-color illustrations add to the guide's appeal. This item is available for \$7.50 plus shipping and handling and sales tax (where applicable). Pick up the *Field Guide* at your local conservation nature center, or order by phone (toll-free) at 877-521-8632 or online at www.mdcnatureshop.com.



Catch the Buzz About Bugs

Insect programs at Cape Girardeau and Springfield

Insects—they surround us, they fascinate us and some try to sting and bite us—but what would a summer evening be like without them? Gather up the family and join the Cape Girardeau and Springfield Conservation Nature Center naturalists as they investigate the creepy-crawly world of insects. The Cape Girardeau program will be held July 27 at 7 p.m., and the Springfield program will be held August 24 at 6:30 p.m. Programs will include hands-on games, crafts and activities. No registration is required, but feel free to call the Cape Girardeau CNC at 573-290-5218 or the Springfield CNC at 417-888-4237 for more details.

NATURE ACTIVITY



Mobile Aquarium



WHETHER YOU WANT to hone your fishing skills or introduce your kids to the wonders of aquatic life, you'll be glad you caught one of the Show-Me Missouri Fish Mobile Aquarium's shows this summer.

Shows feature a variety of equipment and techniques, and they run throughout the day. Learn how fish are adapted to their environments and how seasonal behavior and habits relate to recreational fishing. Department of Conservation personnel will be on hand to answer questions and provide literature.

What: Show-Me Missouri Fish Mobile Aquarium

Featuring: 40-foot-long aquarium, 50–60 fish covering 15–25 species in a natural setting, expert fishing demonstrations

Dates and locations:

July 9–14 at Heart of the Ozarks Fair, West Plains

July 20–22 at Jefferson County Fair and Air Show, Hillsboro

July 27–August 5 at Ozark Empire Fair, Springfield

September 8–15 at SEMO Fair, Cape Girardeau

September 20–22 at Slater Fall Festival, Slater

For more information:

www.missouriconservation.org/4180





Don't Dump That Bait!

Let's keep invasive species
from colonizing new waters.

by Brian Canaday, Bob DiStefano and Chris Riggert

“The invasive species are coming! The invasive species are coming!”

Imagine Paul Revere shouting that warning while riding his horse through Missouri towns. It's likely that few people would panic, but Missourians do need to be on the alert. Many invasive species are assaulting our biological communities, threatening our native species and degrading natural habitats. Some of our most treasured natural resources are in danger.



COURTESY OF THE MICHIGAN SEA GRANT

The proper disposal of bait bucket contents will help prevent the spread of invasive species such as this round goby.

Nonnative species have the potential to eliminate native species, disrupt food chains and harm prized fisheries.

Invasive species come from other places, usually other regions or continents. When they arrive, either naturally or by some kind of introduction, a few of them find conditions ideal for growth and reproduction. They may be larger, more aggressive or more fertile than the native species they compete against, and the new environment may lack predators or other natural checks on their population.

Missouri's bountiful streams, lakes, ponds and marshes are particularly at risk. Missouri is blessed with more than 200 species of native fish, 65 species of native mussels and at least 33 species of native crayfish. Nonnative species, however, are invading our waterways at an alarming rate and have the potential to eliminate native species, disrupt food chains and harm prized fisheries.

Not all invasive species travel across oceans, mountain ranges or political boundaries to find

their way into our local fishing holes. Although many invaders do originate from faraway places, some of Missouri's most severe problems are the result of species that have been transported only a few miles, for example, from one stream to another.

"Transported" is a key word here. There are several ways that people are moving invasive species from one water body to another. Most of the time these introductions are not intentional. People don't realize the potential impact their actions might have. That's good news, for it means that most of these modes of transport can be stopped easily as people learn how to avoid them.

Bait Buckets

Biologists recognize "bait bucket introductions" as one of the most common means of spread-



JIM RATHERT

Rusty crayfish are larger than most of our native crayfish and have rust-colored patches on the backs of their carapaces.

ing aquatic invaders. Bait bucket introductions occur when anglers dump live bait into a water body from which that bait did not originate.

It's easy to see how this might happen. Picture yourself at your favorite fishing hole. It's time to head home. You gather your equipment and carefully pick up any litter. Your bait bucket still contains live crayfish or minnows. Not wanting to waste these critters, you release them into the water. This practice has caused the spread of some of the most notorious invaders, including rusty crayfish and round goby, and maybe even zebra mussels.

The solution to bait bucket introductions is simple. Anglers shouldn't dump their leftover bait in Missouri waters at the end of a fishing trip.

Alternatives to dumping include taking your bait home to use on a future fishing trip, offer-

ing it to another angler to use, dumping it on land far away from any waterway or placing it in a sealed container in the trash.

Releasing Captives

Another dangerous practice that appears to be increasing is that of "liberating" or releasing aquatic creatures that have been held captive in private aquariums or ponds.

The fish or animals may have grown too large to be confined, or their owners may no longer have the time or inclination to care for them. Many people believe the humane thing to do with



Rusty crayfish have black-tipped claws, which may have red or orange on the tips.

Dump leftover bait on land, far away from water.

unwanted fish or other animals is to release them into the wild.

Actually, this practice often causes harm to many other animals and can completely upset balanced ecological systems. Because of the severe damage even a single release can engender, the Conservation Department suggests that creatures kept in aquariums or ponds should never be released to the wild. If a person feels they can no longer care for an animal, we recommend the following alternatives:

- Talk to a pet store owner or the hobby aquarium society (www.missouri-aquariumsociety.org).

They may be able to help find a home for your pet.

- Give the fish or other animals to others who might wish to care for them.
- Dispose of the animals in a sealed container. Your veterinarian may be able to help if you feel that euthanizing the animals is the most appropriate solution.

Close Call

In August 2003, Conservation Department agents and biologists told the owners of Nemo Bait Inc., a bait wholesale company in Perry that thousands of crayfish they had purchased from Wisconsin and distributed to dozens of Missouri bait shops were rusty crayfish, a species that has invaded at least 18 states and caused severe damage to water bodies and their fisheries.

Concerned about potential harm to Missouri fisheries, Vince and Zelda Smith, the owners of the company, undertook the considerable task and financial burden of removing all the rusty crayfish they had distributed to bait shops. They also sacrificed their remaining rusty crayfish stock. Their timely and appropriate response likely prevented serious problems for Missouri waterways.



Owners of NEMO Bait Inc. Vince Smith (right) with son Cody.

Mussels on the Move

Aquatic invasive species like the zebra mussel can inadvertently be transferred from one lake to another. Zebra mussels “hitchhike” on boats, motors, trailers and aquatic plants. Adult zebra mussels can live for several days out of water, and their microscopic larvae can survive in boat bilge water, live wells, engine cooling systems and in bait buckets.

The solution to preventing the spread of invasive species that attach themselves to boats and other watercraft is somewhat more challenging, but you can help by following a few simple steps.

The Law on Liberation

Missouri prohibits importing, exporting or liberating fish, amphibians, reptiles, mammals or any other form of wildlife unless specifically authorized by the *Wildlife Code*.

Missouri’s *Wildlife Code* also establishes a list of “Prohibited Species” that may not be possessed in Missouri. This list includes snakehead fish, walking catfish, rusty crayfish and several species of snails. For a complete list see 3 CSR 10-4.117 of the *Wildlife Code*.

The best argument for not dumping the contents of your bait bucket or aquarium into waters of the state is that the species you are introducing might cause great and irreversible harm to our aquatic resources.

- Inspect your boats and trailers thoroughly and remove any trash, mussels or aquatic weeds before leaving any water body.
- Drain water from the motor, live well, bilge and transom wells, as well as any other water from your boat and equipment, before leaving any water body.
- Dump leftover bait on land, far away from water.
- Rinse your boat, trailer and equipment (including live wells, bilge and cooling systems) thoroughly with a hard spray of hot (104 degrees) water, like that found at a self-serve carwash.
- Dry boat, motor, trailer and equipment thoroughly in the hot sun before using it again.
- Several Missouri Stream Teams are helping by monitoring lakes and streams for zebra mussels. If you would like to join the effort, call 800-781-1989 or visit the Stream Team Web site at www.mostreamteam.org.

Even if everyone implemented all the preventative measures we’ve discussed, we probably would not be able to completely halt the spread of invasive aquatic species in our state. By working together, however, we can slow their spread and protect the recreational, aesthetic, health and economic benefits of Missouri’s lakes, ponds and streams.

Every angler, boater, pet owner and pond owner plays an important role in containing the spread of invasive species. Talk to your family, friends and coworkers about the threats invasive species pose to Missouri waters and enlist them in the fight. If everyone does a small part, we will see big benefits. ▲



JIM RATHER

One way to prevent the spread of zebra mussels is to thoroughly clean your boat, trailer and equipment at a car wash.



JIM RATHER





Lake Jacomo

Fishing

Kansas City anglers have plenty of nearby waters where they can enjoy the tug of a fish.

KC

BY TODD GEMEINHARDT
AND PAM LANIGAN

How far would you travel for good fishing? Fifty miles? One hundred fifty miles?

Although many people drive long distances to catch fish, Kansas City anglers can find great fishing of all types within the four-county area of Cass, Clay, Jackson and Platte counties.

In fact, there are so many types of local fishing opportunities, including shore fishing, boat fishing, lake fishing, pond fishing and river fishing, that Kansas City anglers may have a hard time deciding where to go, what species to target or what type of gear to use.

One thing is sure, though. They don't have to travel far to find quality fishing and collect a nice mess of fish for dinner.

River Opportunities

Boat and bank anglers alike can find plenty of access to the Missouri River. Although the river contains a wide variety of fish species, catfish are probably the most popular. Pole-and-line anglers, as well as those who prefer to use set lines, trot lines and jug lines, catch lots of chan-

nel, blue and flathead catfish—including some that weigh more than 50 pounds—while fishing within view of the Kansas City skyline.

Boaters on the Missouri River have to be careful that they don't literally run into silver and bighead carp. These large fish propel themselves out of the water without warning. They sometimes land in boats and can present a hazard to people and equipment.

Kansas City anglers also have plenty of opportunities to wet a line in nearby smaller rivers and streams. The Blue River (Jackson County), Fishing River (Clay County), Platte River (Platte County), and South Grand River (Cass County) all have good numbers of fish and a variety of fish species, and there are plenty more within an hour's drive of Kansas City.

These smaller streams usually contain lots of channel catfish, but anglers also catch largemouth bass, bluegill, green sunfish, carp and crappie from them.

Almost all area streams have at least one public fishing access. Anglers who want to fish from the bank above or below these access areas should first obtain landowner permission.

Small Lakes and Ponds

Most conservation areas and state, city and county parks in the Kansas City area have lakes or ponds. The Conservation Department works with local government to manage the fisheries in many of these waters and make them inviting and accessible to anglers.

On many managed waters, special regulations concerning daily limits, horsepower limits and fishing methods apply. These are posted at accesses and on area bulletin boards.

A good place to catch large bluegill is Tobacco Hills Lake in the Guy B. Park Conservation Area in Platte County. An 8-inch minimum length limit keeps plenty of bluegill around long enough to grow big. Several longer than 10 inches are caught every summer.

The picturesque 17-acre lake has a boat ramp, but you can effectively fish the lake from shore. Bass are also numerous here, but you'll find few fish longer than the 15-inch minimum length limit.

Watkins Mill State Park in Clay County has a 100-acre lake with both shore and boat fishing access. A 3.75-mile asphalt trail encircles the

River Fishing

County	River	Area Name	Boat Access
Cass	S. Grand	Amarugia Highlands CA	Yes
Clay	Missouri	Cooley Lake CA	Yes
Clay/ Jackson	Missouri	LaBenite Park/ Liberty Bend CA	Yes
Jackson	Missouri	Fort Osage	Yes
	Missouri	Riverfront Park	Yes
	Blue	Brown Athletic Area	Yes
Platte	Platte	Humphrey Access	Yes
	Platte	Platte Falls CA	Yes
	Platte	Kendzora CA	No
	Platte	Marshall CA	No
	Platte	Ringold Access	
	Platte	Schimmel City Access	Yes
	Platte	Union Mill Access	

The Conservation Department sponsors fishing events such as this one for people with disabilities at James A. Reed Conservation Area.





lake, providing anglers easy access to almost all of the shoreline. The lake has good numbers of largemouth bass, bluegill, crappie, channel catfish and redear sunfish.

Anglers often take large redear sunfish in the spring when the fish are spawning in shallow coves and in the shallows near shore. You can sometimes see the fish in the water. These hard-fighting sunfish are vulnerable to small jigs or worms. They make great table fare.

South of the Missouri River, the James A. Reed Memorial Wildlife Area provides lots of good fishing. This 2,603-acre area has 11 fishable lakes and ponds that add up to 252 acres of water. Only children under the age of 16 can fish in Honker Pond.

Anglers catch largemouth bass, bluegill, channel catfish, redear sunfish and hybrid striped bass from area waters. Numerous fishing jetties, docks and trails make the lakes extremely accessible for bank anglers. Rental boats are available on some of the lakes during the summer months.

Visitors to the Reed Area willing to brave cold weather may face action that rivals any of southern Missouri's trout parks. From November through March, the Conservation Department periodically stocks skillet-size rainbow and brown trout in Coot and Plover lakes, as well as in Honker Pond.

A 55-acre lake on Amarugia Conservation Area and the City of Harrisonville's 34-acre North Lake both provide bank and boat fish-

Lake Jacomo, near Lee's Summit, is 970 acres. Amenities include restrooms, docks and a paved fishing trail. For information call 816-503-4800

For More Information

The Conservation Department's Kansas City Regional office at 3424 NW Duncan Road in Blue Springs (816-655-6250) has brushpile maps for some of the lakes. The office can also provide you with the annual "Fishing Prospects" guide, recipes for dough baits and a list of fishing regulations for all Jackson County Parks lakes.

You can get more information about fishing at Smithville Lake by contacting the Liberty office at 816-792-8662.

For more conservation information about the area, visit the Kansas City region Web site at www.missouriconservation.org/areas/kcmetro/.

**James A. Reed
Conservation
Area features
boat rentals,
numerous
fishing jetties,
two fishing
docks and 11
fishable lakes
and ponds (252
acres total).**

ing opportunities in Cass County. Both of these lakes have been stocked with largemouth bass, bluegill, crappie and channel catfish.

Many small ponds in the area are open for bank fishing only and have good fish populations. From April through October, the Conservation Department stocks eight Kansas City Parks and Recreation ponds with channel catfish. Most of the stocked channel catfish average a pound apiece.

Stocked ponds include Blue Valley, Chaumiere, Englewood, Lake of the Woods, Lakewood, North Terrace, Penn Valley and Troost. In addition, the Department stocks trout in Chaumiere Lake from November through March.

The Department also manages the fish populations in five Jackson County park lakes that are open for public fishing. These include Alex George, Bergan, Bowlin Road, Scherer and Wyatt lakes.

Alex George Lake is stocked with channel catfish from April to October and with trout November to March. The other Jackson County lakes receive channel catfish every other year. Catfishing in these lakes can be exceptional at times.

Big Water Fishing

Anglers can find lots of reservoirs within a short drive of downtown Kansas City. Blue Springs,



NOPPADOL PAOTONG

Jacomo, Longview, Prairie Lee (Jackson County) and Smithville lakes (Clay County) provide great fishing from shore or boat.

County boating permits are required for each of these lakes, and fishing by pole and line only is permitted at Blue Springs, Jacomo, Prairie Lee and Longview lakes. At Lake Jacomo you

Lake and Pond Fishing

County	Area Name	Acres	Boat Access (# of ramps)
Cass	Amarugia Highlands CA	55	Yes
	Harrisonville North Lake	34	Yes
Clay	Chaumiere Lake	1	No
	Englewood Lake	1	No
	Lakewood Lake	1	No
	Smithville Lake		Yes
Jackson	Alex George Lake	8	No
	Bergan Lake	3	No
	Blue Springs Lake	720	Yes (2)
	Blue Valley Lake	1	No
	Bowlin Road Pond	4	No
	James A. Reed Memorial WA	252	
	Lake Jacomo	970	Yes (2)
	Lake of the Woods	1	No
	Lone Jack CA	35	Yes (1)
	Longview Lake	930	Yes (2)
	North Terrace Lake	1	No
	Penn Valley Lake	1	No
	Prairie Lee Lake	150	Yes (1)
	Scherer Lake	15	No
	Tarsney and Wood Lakes	17 & 8	Yes
	Troost Lake	1	No
	Wyatt Lake	3	No
Platte	Guy B. Park CA	17	Yes



NOPPADOL PAOTHONG

can also take carp and buffalo by gig, long-bow or crossbow during statewide seasons. At Prairie Lee Lake, longbows and crossbows are not allowed for these species during statewide seasons, but you can use a gig.

Blue Springs Lake provides some of the fastest action for decent-sized carp. Anglers may find success off the dam, in the upper ends of coves and near the north boat ramp as carp congregate on shallow flats to spawn.

Carp in both Lake Jacomo and Prairie Lee Lake aren't as numerous, but they are large. Fish nearly 3 feet long have been pulled into boats during sampling runs.

Channel catfish are abundant in all of these lakes. Blue catfish and flathead catfish can be found in Jacomo and Smithville lakes.

These lakes also contain plenty of largemouth bass, crappie and bluegill. In fact, bass fishing in Lake Jacomo could rival some of the best bass lakes in the state.

In addition to good bass fishing, Smithville Lake provides Kansas City-based anglers a solid walleye fishery. Longview and Jacomo also have walleye populations.

White bass are present in all of these lakes as well. Smithville and Jacomo both have excellent numbers of these hard fighters. Blue Springs Lake also contains hybrid striped bass. They are extremely fun to catch on topwater lures during summer months.

Novice or pro, local or visitor, if you're looking for angling excitement, don't miss fishing Kansas City. ▲

The Kansas City region offers great opportunities to catch fish such as this largemouth bass. To learn more about outdoor activities in this region, visit www.missouriconservation.org/areas/kcmetro/.



GLENN D. CHAMBERS

A close-up photograph of a river otter swimming in water. The otter's head is above water, and it has a white patch on its chin with long, white whiskers. The water is dark blue and rippled. The background is a blurred view of the river.

Missouri's RIVER OTTER *Saga*

**We went from
too few to too
many otters in
just 20 years.**

by Dave Hamilton

Going from zero to 60 in less than 5 seconds is fast. So is going from 50 to more than 15,000 in about 20 years. Maybe it's too fast. We may have broken the speed limit in Missouri with our river otter restoration program. In 1980, we estimated that only 35 to 70 otters survived in the few remnant swamps and wetlands in Missouri's Bootheel region. Their numbers had not changed in more than 50 years. Since we began stocking the animals, their population has peaked at more than 15,000.

BRING 'EM BACK TO MISSOURI

The first batch came from Louisiana in 1982. We fitted them with radio-implants, so we could track them, and set them loose in some of Missouri's finest wetlands in and around Chariton County in north-central Missouri. Knowing the quality of the wetlands, we weren't completely surprised when, in a few short generations, they

made hundreds of new otters that spread out into the adjacent duck clubs and borrow ditches.

Missouri has few such wetlands, so the real test was to see if otters could once again exist in other habitats. We wanted to establish otter populations along Missouri's rivers and streams.

Or, so we thought.

What Otters Eat in Ozark Streams

We have studied otter diets since we began stocking the animals and have found that their most important food is crayfish, which they eat almost exclusively from April until October. Crayfish populations in Ozark streams are among the highest recorded anywhere.

In winter, otters primarily eat fish. They mostly consume long-eared sunfish (35 percent), but also a significant amount of smallmouth bass (12 percent). Goggle-eye and suckers each account for about 10 percent.



GLENND CHAMBERS

During an 11-year program, we released 845 otters, setting them free in 43 streams in 35 counties. We traded some of our wild turkeys for wild-caught Cajun otters—the same subspecies that once existed here.

The rest, as they say, is history. The otters not only survived, they flourished. Otters now exist in every county in the state and in most watersheds, even those miles from the original release sites. And, they made their way into places we never would have believed they could, and where they were really not wanted.

OTTER DISASTER

Fishing is important to Missourians. The state's numerous farm ponds, most of which contain a combination of largemouth bass, bluegill and channel catfish, provide lots of recreational angling for kids and adults.

In our vision for otters living in Missouri, we sure didn't see these ponds as providing good habitat for otters, nor did we see the impending train wreck that otter depredation of the fish in these ponds would cause.

There is no predator of fish more efficient than river otters. Traveling in groups of two to eight animals, they can hammer fish in a small pond before anyone even knows they are there. Sometimes they travel four or more miles from streams to hit these fast-food opportunities.

Otters eat fish in the winter when they are most vulnerable. They especially target hand-fed catfish. They might eat 2 to 3 pounds of fish per day. At times, fish are so easy to catch that otters kill many more than they eat, leaving the evidence of the massacre on the banks for the owners to discover.

As otters multiplied and spread out from the release points, calls began to pour in about farm ponds being ravaged. Anglers became angry, demanding some kind of relief. We now recommend that pond owners who are at all worried about their fish shoot otters when they show up. All we ask is that they contact us if they do so.

Otter damage wasn't limited to farm ponds. Otters also found fishing easy in shallow pools of small headwater streams and tributaries in the central Ozarks. Conservation agents in that region handled more than 500 otter complaints in one year alone. As one local angler put it, "There's not enough room for otters and fishermen in the Ozarks."



Many female otters are having their first litters near their second year of life, earlier than previously documented. This is one of the pieces of information gathered from the otter tracking study the Department has been conducting.

Local politicians became involved, and the otter topic became a hot-rock in the state capitol. The news media fed on the issue with newspaper headlines like, "Otters at Center of Controversy," "The fur flies over Missouri's cute but greedy river otters," and "Ozark Otter Disaster."

Almost overnight, the Conservation Department had gone from hero to goat for its "successful" otter restoration program.

IN SEARCH OF BALANCE

We initiated our first regulated trapping season in 1996 to help bring balance back to the state's rivers and ponds. Despite two court cases forced by two national animal rights groups, we have had annual trapping seasons ever since. Missouri trappers are the backbone of our management efforts to restore some balance to the otter population.

By 1998, however, we realized that the two-month-long trapping season wasn't enough, so we formed a citizen advisory committee to help find a solution. The committee, composed of otter enthusiasts, anglers, county commissioners, an animal rights activist, fisheries and wildlife biologists, stream ecologists, crayfish experts, university professors, graduate students, a trapper and a few local business owners, worked together to tackle the problem.



JIM RATHERT

Scouting otter movement is essential to determining which combination of location and trap will be most successful.



GLENND CHAMBERS

Pond owners experiencing predation of their fish may shoot otters, but are asked to notify the Department if they do so (see page 3 for regional office phone numbers).

After two long years of looking at data, taking field trips to farm ponds, wading along streams searching for otter latrines and fish parts, and wrangling over their varied interests, the team agreed on a compromise.

Otter management zones now protect otters in low-density areas with a limited otter harvest, and they provide much-needed relief in the Ozarks by adding a full month to the trapping season with no limit. This helps us to direct the most intensive trapping pressure where it is most needed, and it allows a sustainable harvest of otters in other areas where we want otter populations to remain stable.

CURRENT STATUS

Our management goal is to use regulated trapping to maintain healthy otter populations within the tolerance levels of both habitats and people.

In the Ozark streams where the problems are the most severe, our goal is to reduce otter populations to the level where we can improve quality sport fish populations.

Thanks to the current high market prices (\$40 to \$120) for otter pelts, trappers have been very helpful. In the 2005–06 trapping season, Missouri trappers took more

than 3,000 otters. In areas where we want fewer otters, trappers have taken as many as 50 percent of the otters each year. Annual survival rates are averaging about 75 percent in areas where our goal is to allow populations to remain stable or continue to increase slowly.

Missouri's otter population probably peaked at somewhere between 15,000 and 18,000 animals. We documented as many as three otters per mile in some small streams, and their fish populations did decline. Anglers report better fishing recently, however, and complaints about otters have gone down, although we still have a way to go in some areas.

The statewide otter population is now closer to our goal of 10,000. In most streams, densities are about one otter per mile, and our fisheries managers report that fish populations look good.

Reducing their numbers has made otters nicer neighbors. People tolerate them better, and even many anglers admit they don't mind sharing a few fish with them. ▲

Tracking Otters

Each year we collect otter carcasses from trappers and, among other tests, we determine their age from their teeth. Otters in Missouri are breeding at earlier ages and having more pups in each litter than previously documented. Many female otters are breeding as yearlings, giving birth to first litters near their second year of life. This cuts the generation time in half, and greatly increases the population growth rate.

Six years ago we enlisted two husband-and-wife trapper teams to live-trap otters and implant small radio transmitters in them. This allows us to determine where otters go, how long they live and how they die.

Of the more than 300 otter captures so far, we have documented 97 mortalities. Of these, 78 were trapped, six were shot, two died from bacterial infections, one was struck by a car and another was struck by a train. We couldn't determine a cause of death for nine of the otters.

What this tracking study suggests is that when food is abundant, there is no other way than trapping to control otters. Without trapping, otter survival rates would contribute to rapid population growth and many more otter problems.



Conibear traps are set underwater in otter travel lanes. These efficient quick-kill traps must be checked every 48 hours. Studies have shown that when food is abundant trapping is the most effective way to control otter populations.

Hunting and Fishing Calendar

HUNTING

	OPEN	CLOSE
Coyotes	5/7/07	3/31/08
Crow	11/1/07	3/3/08
Deer		
Firearms	11/10/07	to be announced
Groundhog	5/7/07	12/15/07
Rabbits	10/1/07	2/15/08
Squirrels	5/26/07	2/15/08
Turkey Fall Firearms	10/1/07	10/31/07

FISHING

	OPEN	CLOSE
Black Bass (certain Ozark streams, see the <i>Wildlife Code</i>)	5/26/07	2/29/08
impoundments and other streams year-round		
Bullfrog	Sunset	Midnight
	6/30/07	10/31/07
Trout Parks	3/1/07	10/31/07

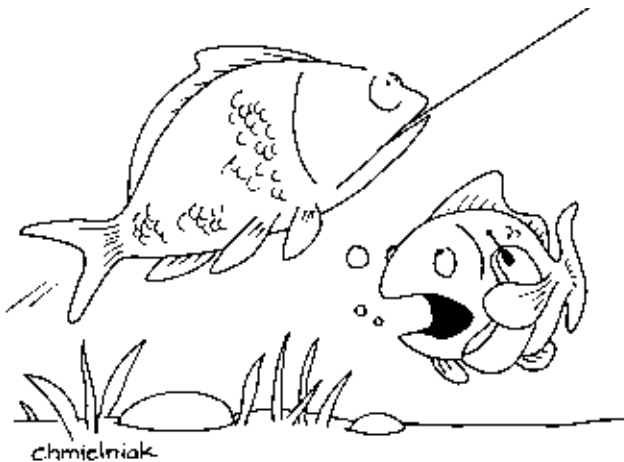
For complete information about seasons, limits, methods and restrictions, consult the *Wildlife Code* and the current summaries of *Missouri Hunting and Trapping Regulations* and *Missouri Fishing Regulations*, the *Fall Deer and Turkey Hunting Regulations and Information*, the *Waterfowl Hunting Digest* and the *Migratory Bird Hunting Digest*. For more information visit www.missouriconservation.org/8707 or permit vendors.

The Department of Conservation's computerized point-of-sale system allows you to purchase or replace your permits through local vendors or by phone. The toll-free number is 800-392-4115. Allow 10 days for delivery of telephone purchases. To purchase permits online go to www.wildlifelicense.com/mo/.



If you see or learn of someone deliberately setting a fire, please dial toll-free:

1-800-392-1111



"Roger can't come to the phone right now.
He's on another line."

Contributors



Invasive Species Coordinator BRIAN CANADAY works statewide on aquatic and terrestrial invasive species issues. He lives on a small farm in southern Boone County with his wife, Bridget, their two children, Joshua and Haley, and their dog, Scooby. They enjoy boating, fishing, hunting and camping in Missouri and beyond.

BOB DISTEFANO, a resource scientist for the Department since 1986, researches stream life and coordinates crayfish conservation and management. He enjoys working with students, making his tolerant wife and kids happy, laughing at life and chasing other animals through woods and streams and eating them.



TODD GEMEINHARDT is a fisheries management biologist in the Kansas City region and has been with the Missouri Department of Conservation since 1999. In his free time, he enjoys hunting and fishing as well as spending time with his wife, Nicole, and his 15-month-old daughter, Madelyn.

DAVE HAMILTON is a resource scientist with the Department of Conservation in Columbia. He studies a variety of wildlife, some of which have made tremendous comebacks, including river otters, bobcats and black bears. He enjoys hunting with his wife, Sue, and family at their cabin in northern Missouri.



PAM LANIGAN is a fisheries management biologist who has been with the Department of Conservation for more than 15 years. She and her husband, Tim, live in Independence with their two young children, Luke and Logan. Pam and her family like to fish, hunt and spend time outside with their dogs.

CHRIS RIGGERT is a fisheries biologist with the Department's Stream Unit. He works primarily with Missouri Stream Teams and educates citizens about how streams function. He maintains a strong interest in crayfish and introduced species. He enjoys floating and fishing as much as his wife, Jeanine, will tolerate.



TIME CAPSULE

June 1967

"Spring Country" by A. George Morris highlights some of the great streams of the Missouri Ozarks. Vacationers, nature lovers and certain commercial industries have been drawn to the more than 160 springs in this region. These include Big Spring located in Carter County, the largest spring in the Ozarks, where an average of 252 million gallons per day emerges from the base of a cliff as a small river, and Santa Fe Spring in Saline County, located in Arrow Rock State Park, one of the smaller springs at 60,000 gallons per day. The latter claims historical fame as a watering place for stage coaches that stopped at the tavern there. For years, the Department of Conservation and the Missouri State Park board have managed these areas, and they are popular with both anglers and vacationers.—*Contributed by the Circulation staff*



AGENT NOTES

The benefits of abundant wildlife far outweigh the problems they cause.

GROWING UP IN rural Missouri in the 1980s, I never experienced anything but an abundance of fish and wildlife resources. However, above our basement stairway hung a shoulder-mount of a 10-point deer that served as a reminder that the state's fish and wildlife haven't always been so plentiful. My father loved to tell about the hunt and harvest of that deer. He usually ended his tale by saying, "You know, there weren't very many deer back then."

I often hear complaints that have resulted from our current high population levels of wildlife. People tell us about groundhogs burrowing beneath barns, raccoons strewing trash, otters killing fish, Canada geese fouling lawns, and deer eating crops and landscaping plants. We need to address these problems—and we do—but let's not forget the benefits our bountiful wildlife populations provide. We can harvest more deer, we have longer seasons on ducks, furbearers and archery deer and turkey, and we can enjoy many more wildlife viewing opportunities.

We are fortunate to live in a time—and place—where wildlife populations are healthy and thriving. However, it's easy to forget how far we have come and how much effort went into fish and wildlife restoration. As G. K. Chesterton once said, "When it comes to life the critical thing is whether you take things for granted or take them with gratitude."



Jade Wright is the conservation agent for Holt County, which is in the Northwest region. If you would like to contact the agent for your county, phone your regional Conservation office listed on page 3.

behind the CODE

"Edible" isn't allowable on Missouri's Natural Areas.

BY TOM Cwynar

Missouri's *Wildlife Code* allows people to enjoy nature's bounty by permitting them to harvest nuts, berries, fruits, edible wild greens and mushrooms from Conservation Department areas for personal consumption.

Missouri's *Wildlife Code* is a permissive code. In this case, this means that people can't pick flowers, dig roots or take plants or parts of plants other than nuts, berries, fruits, edible wild greens and mushrooms from conservation areas because these things are not specifically allowed.

Chapter 11.135 of the *Code* goes on to say that none of the allowed items may be taken from the grounds of the nature centers in St. Louis, Springfield, Jefferson City or Cape Girardeau, or from the Department's headquarters property in Jefferson City. The same restriction applies to the grounds of Burr Oak Woods Nature Center in Kansas City and Rockwoods Reservation in St. Louis, except that visitors may harvest mushrooms for personal use.

Conservation Department Botanist Tim Smith said these restrictions are necessary because of the high number of visitors to these areas. If taking was allowed, there soon wouldn't be anything left to take.

The *Wildlife Code* also prohibits taking edible wild greens from Missouri's designated natural areas. According to Smith, this restriction helps maintain the integrity of the state's natural areas by protecting their often unique vegetation from damage.



“I AM THE NEXT GENERATION OF CONSERVATION”

Jen Stewart of Jefferson County has been a member of Stream Team 288 for 13 years, since she was 8 years old. Her stream team, located near St. Louis, monitors water quality and picks up trash on the Meramac and Big rivers, as well as others in the region. To learn more about conservation activities, visit www.missouriconservation.org.



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